

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A device for transporting biological fluid comprising:
at least one pressure sensor in fluid communication with the biological fluid
~~configured for sensing a difference between a pressure of the biological fluid and a~~
~~reference pressure, wherein the at least one pressure sensor comprising comprises:~~
a container comprising at least a surface confining a cavity inside the
container, said surface comprising at least one opening exposing the cavity to
the atmosphere such that a reference pressure inside the cavity is equal to
atmospheric pressure; and
an electric circuit arranged in the container, wherein the electric circuit that
is configured to be energized energizable by a first an alternating
electromagnetic field at a characteristic frequency, wherein the characteristic
frequency of the electric circuit is generated by an external transmitter inductively
coupled to the pressure sensor and configured to communicate information
indicative of a pressure from the pressure sensor a difference between a
pressure of the biological fluid and the reference pressure via a second
alternating electromagnetic field to an external receiver inductively coupled to the
pressure sensor, wherein the second alternating electromagnetic field causes a
current dip in the external receiver,

wherein the device is in at least a part of an extracorporeal circuit, said at least part of the extracorporeal circuit being disposable.

2. (Currently Amended) The device of claim 1, wherein the ~~sensor~~
~~comprises container~~ is a compressible container capable of indicating pressure of the
biological fluid through compression or expansion.

3. (Currently Amended) The device of claim 2, wherein the ~~pressure sensor~~
electric circuit further comprises at least one component chosen from a capacitor and
an inductor, said component forming a resonance circuit ~~for energizable by the first~~
alternating electromagnetic field, wherein said characteristic frequency is a resonance
frequency of the resonance circuit decided by a characteristic parameter of said
component, wherein said characteristic parameter of said component is configured to
vary with the compression and/or expansion of the container.

4. (Currently Amended) The device of claim 3, wherein the component is a
capacitor and wherein the characteristic parameter is capacitance.

5. (Previously Presented) The device of claim 2, wherein the container
includes a substantially rigid box having a membrane.

6. (Previously Presented) The device of claim 5, wherein a portion of the component is arranged on the membrane.

7. (Currently Amended) The device of claim 6, wherein a the portion of the component is configured to ~~vary~~ move with a movement of the membrane.

8. (Currently Amended) The device of claim 7, wherein a the portion of the component is formed from or by the membrane.

9. (Canceled).

10. (Previously Presented) The device of claim 1, wherein the pressure sensor is disposed within the device.

11. (Cancelled).

12. (Currently Amended) The device of claim 1, wherein the characteristic frequency of the first and second alternating electromagnetic fields is a radio frequency.

13. (Previously Presented) The device of claim 1, wherein the pressure sensor is connected to the extracorporeal circuit such that it forms a portion of the circuit.

14. (Previously Presented) The device of claim 1, wherein the device is insert molded.

15. (Currently Amended) The device of claim 1, wherein the sensor is ~~glued or welded~~ attached to a wall of the extracorporeal circuit ~~in a manner such that establishes a seal~~ is formed between the sensor and the extracorporeal circuit.

16. (Previously Presented) The device of claim 1, wherein at least a part of the extracorporeal circuit is configured for at least one application chosen from dialysis, blood separation, blood donation, hemofiltration, and cardiopulmonary bypass.

17. (Currently Amended) The device of claim 1, wherein at least a part of the extracorporeal circuit is chosen from a dialyser, cassette, ultrafilter, tube, connector, container, chamber, fluid bag, blood container, collection bags, pump segment part of lineset, and oxygenator.

18. (Canceled).

19. (Currently Amended) The device of claim 1, wherein the device is ~~used during~~ configured for extracorporeal biological fluid management.

20. (Previously Presented) The device of claim 19, wherein the fluid is blood.
21. (Previously Presented) The device of claim 19, wherein the management is dialysis.
22. (Currently Amended) A system for managing biological fluids, comprising:
the device of claim 1;
at least one transmitter configured to transmit ~~[[an]]~~ a first alternating
electromagnetic field to the pressure sensor in the device; and
at least one receiver configured to receive ~~radio frequency information from the~~
alternating electromagnetic field as modified by its interaction with the device, wherein
the received ~~information~~ alternating electromagnetic field is indicative of a pressure
sensed by the device; and
a control unit configured to control the transmitter and the receiver.
23. (Canceled).
24. (Previously Presented) The system of claim 22, wherein the system forms
part of a dialysis machine.
25. (Currently Amended) The system of claim 22, wherein the system is ~~used~~
during configured for extracorporeal biological fluid management.

26. (Previously Presented) The system of claim 25, wherein the fluid is blood.
27. (Previously Presented) The system of claim 25, wherein the management is dialysis.
28. (Currently Amended) A method of pressure sensing in a biological fluid using the device of claim 22, comprising the steps:
- providing at least one first-alternating electromagnetic field to the pressure sensor;
- sensing the at least one ~~second~~-alternating electromagnetic field as modified by its interaction with the device at an external receiver inductively coupled to the pressure sensor, wherein the second alternating electromagnetic field is generated the pressure sensor based on the first alternating electromagnetic field and a pressure change of the biological fluid, wherein the second alternating electromagnetic field causes a current dip in the external receiver; and
- providing the sensed field as a signal that is indicative of ~~the~~ a pressure sensed by the pressure sensor.
29. (Currently Amended) A device for transporting biological fluid, comprising:

at least one pressure sensor in fluid communication with the biological fluid configured for sensing a difference between a pressure of the biological fluid and a reference pressure, wherein the at least one pressure sensor comprises:

a container exposed to the atmosphere ~~outside the extracorporeal circuit~~, such that the reference pressure within the container is equal to atmospheric pressure; and

an electric circuit within the container, wherein the electric circuit is ~~configured to be energized~~ energizable by a first alternating electromagnetic field at a characteristic frequency, wherein the characteristic frequency of the electric circuit is generated by an external transmitter inductively coupled to the pressure sensor and configured to communicate information indicative of a pressure from the pressure sensor the difference between the pressure of the biological fluid and the reference pressure via a second alternating electromagnetic field to an external receiver inductively coupled to the pressure sensor, wherein the second alternating electromagnetic field causes a current dip in the external receiver,

wherein the device is in at least a part of an extracorporeal circuit, said at least part of the extracorporeal circuit being disposable.

30. (Previously Presented) The device of claim 29, wherein the container is a compressible container capable of indicating pressure through compression or expansion.

31. (Currently Amended) The device of claim 30, wherein the ~~pressure-sensor~~ electric circuit further comprises at least one component chosen from a capacitor and an inductor, said component forming a resonance circuit ~~for energizable by the first-~~ alternating electromagnetic field, wherein said characteristic frequency is a resonance frequency of the resonance circuit decided by a characteristic parameter of said component, wherein said characteristic parameter of said component is configured to vary with the compression and/or expansion of the container.

32. (Currently Amended) The device of claim 31, wherein the component is a capacitor and wherein the characteristic parameter is capacitance.

33. (Currently Amended) The device of claim 29, wherein the characteristic frequency ~~of the first and second alternating electromagnetic fields~~ is a radio frequency.

34. (Previously Presented) The device of claim 29, wherein the pressure sensor is connected to the extracorporeal circuit such that it forms a portion of the circuit.

35. (Previously Presented) The device of claim 29, wherein the device is insert molded.

36. (New) A system for managing biological fluids, comprising:
the device of claim 1;

at least one oscillator configured to drive an antenna to provide alternating electromagnetic fields at a plurality of frequencies to the device; and

a control unit configured to detect an electrical signal from the oscillator and determine the characteristic frequency of the electric circuit in the device based on the detected electrical signal.

37. (New) The system of claim 36, wherein the electrical signal is an current dip in the oscillator, wherein the control unit is configured to identify the frequency of the alternating electromagnetic field corresponding to the current dip as the characteristic frequency.

38. (New) The system of claim 36, wherein the control unit is further configured to determine a pressure based on the characteristic frequency.

39. (New) A method of pressure sensing in a biological fluid using the system of claim 36, comprising the steps of:

providing alternating electromagnetic fields at a plurality of frequencies to the device;

detecting an electrical signal from the oscillator;

determining the characteristic frequency of the electric circuit in the device based on the detected electrical signal.

40. (New) The system of claim 39, wherein the electrical signal is an current dip in the oscillator, wherein the step of determining the characteristic frequency comprises the step of identifying the frequency of the alternating electromagnetic field corresponding to the current dip as the characteristic frequency.

41. (New) The system of claim 39, wherein the step of determining the characteristic frequency comprises the step of determining a pressure based on the characteristic frequency.

42. (New) The device of claim 1, wherein the container comprises at least a substrate and a lid attached to the substrate, wherein the at least one opening is located on the substrate.